

WHAT IS CLAIMED IS:

1. A vascular medical device having a distal end, a body portion and a proximal end, wherein the body portion is made of a coil of a plurality of wires at least spaced from the distal end, that are wound adjacent to one another and having one or more sequences of turns, and at least two adjacent sequences of turns are formed by at least two individual wires of the plurality.
2. The vascular medical device according to claim 1, wherein the coil is a row is made up from 2 to 12 helically wound wires.
3. The vascular medical device according to claim 1, wherein the coil is a row is made up from 4 to 8 helically wound wires.
4. The vascular medical device according to claim 1, wherein the wires have a pitch angle in the range of 26° to 76°.
5. The vascular medical device according to claim 1, wherein the wires have a pitch angle in the range of 40° to 65°.
6. The vascular medical device according to claim 1, wherein the wires in the coil are located closely adjacent to each other in a row.
7. The vascular medical device according to claim 1, wherein the body portion is wound of wires having a mainly circular cross-section.
8. The vascular medical device according to claim 1, wherein the wires of the device are of uniform diameter.

9. The vascular medical device according to claim 1, wherein the wires of each coil are of uniform diameter.

10. The vascular medical device according to claim 1, wherein the diameters of wires in one segment of the device are different than the diameters of wires in another segment of the device.

11. The vascular medical device according to claim 1, wherein the body portion is provided with a coating of elastic material on at least one of the radially inwardly or outwardly facing surfaces of the coil.

12. The vascular medical device according to claim 11, wherein the coating is provided on the inner surface of the body portion.

13. The vascular medical device according to claim 11, wherein the coating is provided on both the inner surface and the outer surface of the body portion.

14. The vascular medical device according to claim 11, wherein the coating is a low-friction coating.

15. The vascular medical device according to claim 11, wherein the coating is of hydrophilic material.

16. The vascular medical device according to claim 11, wherein the thickness of the coating at the middle of the wire is less than 0.1 mm.

17. The vascular medical device according to claim 16, wherein the thickness of the coating at the middle of the wire is less than 0.02 mm.

18. The vascular medical device according to claim 1, wherein the wires in said coil are machined to a lesser outer diameter in a region of the catheter.

19. The vascular medical device according to claim 18, wherein the region is a distal region machined to a tapering shape with decreasing outer diameter in the distal direction.

20. The vascular medical device according to claim 1, wherein the vascular medical device is a catheter having a 30 cm long distal segment, the distal segment having a maximum outer diameter of less than 2.0 mm.

21. The vascular medical device according to claim 1, wherein the vascular medical device is a microcatheter with a 30 cm long distal segment having a maximum outer diameter of less than 1.00 mm.

22. The vascular medical device according to claim 21, wherein said maximum outer diameter is 0.75 mm.

23. The vascular medical device according to claim 1, wherein the vascular medical device is a neuromicrocatheter having a distal segment of a length of at least 10 cm which has a maximum outer diameter of 0.30 mm.

24. The vascular medical device according to claim 1, wherein the number of wires varies along the length of the catheter, so that the number of wires diminishes in the distal direction.

25. The vascular medical device according to claim 1, wherein in a proximal segment the row of wires is stiffened by a supplementary tubular member.

26. The vascular medical device according to claim 1, wherein the distal end is provided with a buffer member.

27. The vascular medical device according to claim 1, wherein the wires extending into the distal end segment are continuous from the distal end to the proximal end of the catheter.

28. The vascular medical device according to claim 1, wherein the catheter is open ended at both the proximal end and the distal end.

29. The vascular medical device according to claim 1, wherein the device is a delivery system for an expandable prosthesis and includes a receptacle portion at the distal end to contain the expandable prosthesis.

30. The vascular medical device according to claim 1, wherein the device is a receptacle for containing an expandable prosthesis.

31. The vascular medical device according to claim 1, wherein the device is an embolization device introducer.

32. The vascular medical device according to claim 1, wherein the device is a pusher for urging a prosthesis from a distal end of a catheter.

33. The vascular medical device according to claim 1, wherein the device is a central member movable within a luminal device.

34. A vascular medical device comprising:
a catheter having a distal end, a distal end segment, a body portion having at least one lumen extending through the body portion in a longitudinal direction from a

proximal end toward the distal end, which body portion is made of a multiple filament helically wound row of from four to eight wires of circular cross-section closely adjacent to each other, wherein said row of wires has a pitch angle in the range of 40° to 65°, the wires being provided with a low-friction sealing coating of elastic material on at least a radially outwardly facing surface, the sealing coating having a thickness at the middle of each of the wires of less than 0.1 mm, with the number of wires in the row diminishing in the distal direction and ones of the wires extending into the distal end segment are continuous from the distal end segment to the proximal end of the catheter.

35. A catheter system comprising:

a catheter having a distal end, a body portion having at least one lumen with an inside surface extending through the body portion in a longitudinal direction from a proximal end toward the distal end, and at least one central member for coaxial advancement through said lumen, which body portion is made of a multiple filament helically wound row of wires, wherein said row of wires has a pitch angle in the range of 26° to 76°, and wherein said inside surface of said body portion is mainly undeformable by the central member.

36. A delivery system comprising:

a delivery device with a distal end and a shaft portion with a lumen extending in a longitudinal direction from a proximal end and toward the distal end, a self-expandable prosthesis arranged in a receptacle at the distal end of the delivery device, and a pusher member arranged in the lumen of said delivery device to cause relative axial movement of the self-expandable prosthesis with respect to the delivery device,

said shaft portion of said delivery device comprising a first helically wound multiple filament row of from four to eight wires of circular cross-section closely adjacent to each other, wherein said row of wires has a pitch angle in the range of 40 ° to 65 °, the wires being provided with a low-friction sealing coating of elastic material on at least a radially outwardly facing surface, the sealing coating having a thickness at the middle of each of the wires of less than 0.1 mm,

said receptacle comprising a second helically wound multiple filament row of from two to twelve wires of circular cross-section closely adjacent to each other, wherein said row of wires has a pitch angle in the range of 26 ° to 76 °,

said pusher member comprising a third helically wound multiple filament row of from two to twelve wires of circular cross-section closely adjacent to each other, wherein said row of wires has a pitch angle in the range of 26 ° to 76 °, and

one of a radially inwardly facing surface of said delivery device and a radially outwardly facing surface of said pusher member being provided with a low-friction sealing coating of elastic material.

37. A delivery system comprising:

a delivery device with a distal end and a shaft portion with a lumen extending in a longitudinal direction from a proximal end and toward the distal end, a self-expandable prosthesis arranged in a receptacle at the distal end of the delivery device, and a pusher member arranged in the lumen of said delivery device to cause relative axial movement of the self-expandable prosthesis with respect to the delivery device, said shaft portion of said delivery device comprising a first helically wound multiple filament row of wires.

38. An embolization device introducer comprising:
a delivery member having a proximal section, and a distal section with a connection means for detachably mounting of an embolization device, wherein the delivery member comprises a multiple filament helically wound row of four to eight closely adjacent wires extending from said distal section toward the proximal section of the delivery member, wherein said row of wires has a pitch angle in the range of 40 ° to 65 °, the wires being provided with a low-friction sealing coating of elastic material on at least a radially outwardly facing surface, the sealing coating having a thickness at the middle of each of the wires of less than 0.1 mm.

39. An embolization device introducer comprising:
a delivery member having a proximal section, and a distal section with a connection means for detachably mounting of an embolization device, wherein the delivery member comprises a multiple filament helically wound row of wires extending from said distal section toward the proximal section of the delivery member.